You are taking "Final Exam" as a timed exam. The timer on the right shows the time remaining in the exam.

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Final Exam Instructions

1. Time allowed: **1 hour**

2. Attempts per question:

- One attempt - For True/False questions

- Two attempts - For any question other than True/False

3. Clicking the "**Final Check**" button when it appears, means your You will **NOT** be able to resubmit your answer for that question

IMPORTANT: Do not let the time run out and expect the syste automatically. You must explicitly submit your answers, othe marked as incomplete.

QUESTION 1 (1/1 point)

Why use a Data Flow graph to solve Mathematical expressions?

- ⦿ To create a pipeline of operations and its corresponding valu

- ◯ To represent the expression in a human-readable form

- ◯ To show the expression in a GUI

- ◯ Because it is only way to solve mathematical expressions in a

- ◯ None of the above

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▸ Course Survey

QUESTION 2 (1/1 point)

What is an Activation Function

- ○ All of the above

- ○ A function that models a phenomenon or process

- ◉ A function that triggers a neuron and generate the outputs

- ○ A function to normalize the output

- ○ None of the above

You have used 2 of 2 submissions

QUESTION 3 (1/1 point)

Why TensorFlor is considered fast and suitable for Deep Learning?

- ○ it is suitable to operate over large and multidimensional tens

- ○ runs on CPU

- ○ its core is based on C++

- ○ runs on GPU

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QUESTION 4 (1 point possible)

TensorFlow can replace Numpy?

- ○ None of the above

- ○ No, whatsoever

- ○ Only with bumpy, we can't solve Deep Learning problems, th required

- ◉ Yes, completely ✖

- ○ Partially for some operations on tensors, such as minimizatic

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QUESTION 5 (1 point possible)

What is FALSE about Convolution Neural Networks(CNN)

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○ Fully connects to all neurons in all the layers

⦿ connects only to neurons in local region(kernel size) of input

○ builds feature maps hierarchically in every layer

○ Inspired by human visual system

○ None of the above

You have used 2 of 2 submissions

QUESTION 6 (1/1 point)

What does "Strides" in Maxpooling Mean

○ The number of pixels, kernel should add.

⦿ The number of pixels, kernel should be moved. ✔

○ The size of kernel.

○ The number of pixels, kernel should remove.

○ None of the above

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QUESTION 7 (1 point possible)

What is TRUE about "Padding" in Convolution

○ size of Input Image is reduced for "VALID" padding.

○ Size of Input Image is reduced for "SAME" padding.

◉ Size of Input Image is Increased for "SAME" padding.   ✖

○ Size of input image is increased for "VALID" padding.

○ All of the above

You have used 2 of 2 submissions

QUESTION 8 (1/1 point)

Which of the following best describes Relu Function

○ (-1,1)

○ (0,5)

◉ (0, Max)   ✔

○ (-inf,inf)

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QUESTION 9 (1/1 point)

Which ones are types of Recurrent Neural Networks?

- ◯ Hopfield Network

- ◯ Elman Networks and Jordan Networks

- ⦿ Recursive Neural Network ✔

- ◯ Deep Belief Network

- ◯ LSTM

QUESTION 10 (1/1 point)

What is TRUE about RNNs

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○ RNNs can predict the future

◉ RNNs are VERY suitable for sequential data ✔

○ RNNs are NOT suitable for sequential data

○ RNNs are ONLY suitable for sequential data

○ All of the above

You have used 2 of 2 submissions

QUESTION 11 (1/1 point)

What is the problem with RNNs and gradients?

○ Numerical computation of gradients can drive into instabiliti

○ Gradients can quickly drop and stabilize at near zero

○ Propagation of errors due to the recurrent characteristic

○ Gradients can grow exponentially

◉ All of the above ✔

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QUESTION 12 (1/1 point)

What type of RNN would you use in a NLP project to predict the ne
(only one is correct)

- ○ Bi-directional RNN

- ○ Neural history compressor

- ◉ Long Short Term Memory ✔

- ○ Echo state network

- ○ None of the above

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QUESTION 13 (1/1 point)

How RBM can reduce the number of features?

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○   By transforming the features using a kernel function

○   By randomly filtering out a few features then checking if the i regenerated

○   By minimizing the difference between inputs and outputs, wl features in the

○   By cutting of features with less variance

◉   All of the above   ✔

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QUESTION 14 (1/1 point)

How Autoencoders compares to K-means?

- ○ Autoencoders are always faster than k-means
- ○ Both are based on Neural Networks
- ○ K-Means is always better than Autoencoders
- ◉ Both can cluster the data ✔
- ○ None of the Above

You have used 2 of 2 submissions

QUESTION 15 (1/1 point)

Select all possible uses of Autoencoders and RBM (select all that ap

- ○ Predict data in time series
- ○ Pattern Recognition
- ◉ Dimensionality Reduction ✔
- ○ Clustering

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QUESTION 16 (1/1 point)

What is TRUE about Collaborative Filtering

- ◉ it is a technique used by Recommender Systems ✔
- ○ None of the Above
- ○ It makes automatic predictions for a user by collecting inform
users
- ○ RBM can be used to implement a collaborative filter
- ○ It is Deep Neural Network

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QUESTION 17 (1/1 point)

Which of the statements is TRUE for training Autoencoders:

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○ The Size of Last Layer must atleast be 10% of Input layer Dim

◉ The size of input and Last Layers must be of Same dimension

○ The Last Layer must be Double the size of Input Layer Dimen

○ The Last Layer must be half the size of Input Layer Dimension

○ None of the Above.

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QUESTION 18 (1/1 point)

To Design a Deep Autoencoder Architecture, what factors are to be

○ The Size of centre most layer has to be close to number of Im be extracted.

○ The Centre most Layer should have smallest size compared t

○ The Network should have odd number of Layers

○ All the layers must be symmetrical with respect to centre mos

◉ All of the Above ✔

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QUESTION 19 (1/1 point)

With is True about Backpropogation:

○ Can be used to train LSTM

○ Can be used to train CNN

○ Can be used to train RBM

○ Can be used to train Autoencoders

◉ All of the Above ✔

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QUESTION 20 (1/1 point)

How Autoencoder can be Improved to handle Higly nonlinear Data

○ Use Genetic Algorithms

◉ Add more Hidden Layers to the Network ✔

○ Use Higher initial Weight Values

○ Use lower initial weight Values

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